



## **Diagnostic Codes Used to Define Cohort** (HIV/AIDS)

ICD-9 code	Description
042	HUMAN IMMUNODEFICIENCY VIRUS (HIV) DISEASE
0420	HIV WITH SPECIFIED INFECTIONS
0421	HIV CAUSING OTHER SPECIFIED INFECTIONS
0422	HIV WITH SPECIFIED MALIGNANT NEOPLASMS
0429	HIV-ACQUIRED IMMUNODEFICIENCY SYNDROME UNSPECIFIED
V08	ASYMPTOMATIC HUMAN IMMUNODEFICIENCY VIRUS [HIV] INFECTION STATUS

#### **Highlights**

#### Table 6.1

#### **National Overview**

In FY-2000, the VHA had 18,235 HIV/AIDS patients with either a primary or secondary diagnostic code of one or more of the codes listed in the box above. This number represents approximately less than one percent (.55%) of the total patient population during the fiscal year (Table 6.1). As with most patients seen in the VHA, the majority of patients were male (97.77%), with only 2.23% female. HIV/AIDS patients are more highly represented in the younger age brackets. Less than 2% of HIV/AIDS patients were in the age bracket over 75 (1.34%), 4.8% were aged 65-74, and 10.77% were between the ages of 55-64; by contrast, 41.28% of HIV/AIDS patients were aged 45-54 and an additional 41.81% were under the age of 45. The proportion of patients who were married is relatively low, with only 18.28% of patients married and 81.72% of patients in the "not married" category. The "Means Test" categories show that

about thirty percent (29.43%) were Priority 1 - 3 (service-connected injured) veterans and about over sixty percent (61.23%) were Priority 5 (low income).

#### **VISN Overview**

The volume of patients with HIV/AIDS ranged from a high of 2,338 individuals in Sunshine network (VISN 8) to a low of 122 in the Central Plains (VISN 14).

VISNs with the lowest percentages of HIV/AIDS patients in their total patient population include: the Upper Midwest (VISN 13) and Central Plains (VISN 14). The Capital (VISN 5) and New York/New Jersey (VISN 3) have the highest percentage of HIV/AIDS patients nationally, but the percentage is still under 2%. Over half of the HIV/AIDS patients in the Central Plains (VISN 14) and the Heartland (VISN) networks are under the age of 45. Similar to the national pattern, HIV/AIDS patients across networks are highly represented in the lower age groups, with most of these patients under the age of 54. The majority of patients with HIV/AIDS are in Priority Group 5 (low income) across all VISNs. VISNs with over 70% of HIV/AIDS patients in the low-income category include: Great Lakes (VISN 12) and Heartland (VISN 15); however, the percentages in low incomes is relatively high across all networks. Of all the patient cohorts under study, the HIV/AIDS group has the highest percentage of low-income patients.

#### **Table 6.2**

This table compares utilization by the HIV/AIDS **primary** diagnosis group for all conditions with utilization by all VA patients for all conditions. Note that for this table, only patients who had a primary diagnosis of HIV/AIDS were selected. If a patient had HIV/AIDS as a secondary diagnosis only, he/she is not included. Further, for our primary diagnosis HIV/AIDS group we examined all utilization that occurred during the fiscal year, both HIV/AIDS-specific and all other non-HIV/AIDS related medical care obtained.

As an example of what the data show and how to interpret the findings, examine the Capital network (VISN 5). In this particular network, 1.44% of the total patients seen at a VA facility in fiscal year 2000 had a primary diagnosis of HIV/AIDS. This group of patients accounted for 3.07% of the total bed-days of care in VISN 5, 4.23% of total discharges in VISN 5, and 3.53% of outpatient visits in VISN 5 made by all patients of VA health care services in the network for all medical conditions.

#### Table 6.3

Table 6.3 is similar to Table 6.2 except that patients who only had a **secondary** diagnosis of HIV/AIDS are examined rather than patients who had a primary diagnosis. This table compares utilization by the HIV/AIDS secondary diagnosis group for all health conditions they had during the year (i.e., includes both HIV/AIDS-specific utilization and utilization for all other non-HIV/AIDS care the patient may have received) with utilization by all VISN patients for all conditions.

Using the example of VISN 5, the data can be interpreted as follows: .08% of the patients in VISN 5 had at most a secondary diagnosis of HIV/AIDS, but never a primary diagnosis. This group of patients accounted for .48% of the total bed-days of care, .39% of total discharges and .13% of outpatients visits utilized by all patients in the network for all conditions.

#### Table 6.4

Table 6.4 compares resource utilization specifically directed at treating HIV/AIDS. In other words, we examine the utilization for which the primary diagnosis (DXLSF) was a defining diagnosis for the HIV/AIDS, with utilization for all conditions by all patients in each network.

For example, in VISN 5 1.44% of the patients had some utilization for which the primary diagnosis was HIV/AIDS. Utilization specifically directed at treating the HIV accounted for .53% of all

bed-days of care, .44% of all discharges, and .86% of all outpatient visits.

#### **Table 6.5**

Table 6.5 combines the information from Tables 6.2 and 6.4, comparing utilization by the HIV/AIDS primary diagnosis group specifically directed at treating their condition with utilization by this same group for all conditions. For example, in VISN 5 1.44% of the patients had some utilization for HIV/AIDS. These patients accounted for 6,824 bed-days of care in FY-2000, of which 1,183, or about 17%, were utilized specifically for treating their HIV/AIDS (i.e., primary diagnosis (DXLSF) of HIV/AIDS). Similarly, 10.37% of the discharges for patients in the HIV/AIDS primary diagnosis group resulted from inpatient stays to treat their disease, and 24.4% of the outpatient visits made by these patients were for specifically for the treatment of HIV/AIDS.

#### Costs

Cost data are reported for utilization of VA services by VA patients with HIV/AIDS in Table 6.6 and Table 6.7. Veterans with HIV/AIDS are identified by an HIV/AIDS diagnosis for at least one inpatient or outpatient service received. We separately report for veterans who had at least one primary diagnosis of HIV/AIDS and veterans whose only diagnoses of HIV/AIDS are secondary to another diagnosis. Costs are for VA utilization and include inpatient, outpatient, and pharmacy services for all causes, not just for HIV/AIDS-specific use. That is, we report all VA costs for all causes for individuals identified as having HIV/AIDS.

There were 18,235 individuals with at least one primary or secondary diagnosis of HIV/AIDS for whom cost data were available, and these costs averaged \$13,899 per veteran. Breaking these costs down by whether or not the veteran had at least one primary diagnosis of HIV/AIDS, we have an average cost of \$13,588 per veteran for those with at least one primary care diagnosis of HIV and \$18,351 per veteran for those patients with only secondary diagnoses. The higher



cost for those with only a secondary diagnosis probably reflects the fact they have more severe co-morbidities that result in higher utilization. For example, for those patients with only a secondary diagnosis of HIV/AIDS, inpatient medical/surgical costs were 191% higher, other inpatient (e.g., psychiatric disorders) costs were 339% higher, and outpatient visits were 104% higher than for those with a primary diagnosis of HIV/AIDS, while pharmaceutical costs per patient was only 26% of the costs for veterans with at least one primary diagnosis of HIV/AIDS. Thus, it may be that during these other acute care inpatient episodes, HIV/AIDS was also diagnosed as a secondary problem. Focusing on those with at least one primary diagnosis of HIV/AIDS, the \$13.588 costs per veteran are distributed as follows: approximately 31% are for inpatient medical/surgical services, 12% are for other inpatient services, 26% are for outpatient services, and 31% are for pharmaceutical services. Across VISNs, overall costs per veteran with a primary diagnosis of HIV/AIDS ranged from \$9,123 (VISN 14) to \$18,590 (VISN 13) per veteran.

While there are relatively few HIV/AIDS patients when compared to the overall patient population, these data show that the average cost per patient is relatively high, that complications of the disease are evident in the utilization of other services, and that pharmacy costs are a sizeable proportion of total costs for those patients with a primary diagnosis of HIV/AIDS.

Table 6.1: Overall Prevalence Statistics — HIV/AIDS, FY-2000														
Veterans Integrated Service Network	Total Number of	Patients HIV/A	Gender (%)				Group (%			Marita (%	l Status ⁄₀)	Means Test Status (%)		
	Patients	N	(%)	M	F	<45	45-54	55-64	65-74	75+	Married	Not Married	Service Connected	Low Income
New England (1)	158,204	609	0.38	97.21	2.79	32.18	52.05	8.54	4.11	3.12	16.26	82.43	31.53	58.46
Upstate NY (2)	100,499	316	0.31	97.78	2.22	37.66	47.78	9.18	4.43	0.95	19.30	78.16	30.70	57.59
NY/NJ (3)	166,593	2,147	1.29	98.51	1.49	30.18	49.65	12.72	6.01	1.44	16.58	82.35	26.18	57.85
Stars and Stripes (4)	202,472	920	0.45	97.83	2.17	39.13	46.20	9.46	4.24	0.98	16.52	81.74	29.57	62.28
Capitol (5)	88,163	1,335	1.51	97.83	2.17	43.30	41.65	10.11	3.75	1.20	14.31	84.72	25.99	65.17
Mid-Atlantic (6)	161,081	985	0.61	95.43	4.57	45.18	42.74	8.02	3.45	0.61	18.27	79.70	36.85	55.03
Atlantic (7)	201,514	1,654	0.82	97.82	2.18	50.60	36.82	7.98	3.81	0.79	15.78	82.95	32.65	58.04
Sunshine (8)	308,906	2,338	0.76	97.43	2.57	39.61	41.15	11.98	5.95	1.33	19.38	68.99	32.68	61.25
Mid-South (9)	165,501	512	0.31	96.88	3.13	47.46	39.06	8.01	3.13	2.34	16.02	83.20	28.32	65.04
Ohio (10)	117,463	469	0.40	96.38	3.62	45.84	37.74	8.74	5.33	2.35	13.65	85.07	30.06	64.39
Vets in Partnership (11)	142,393	638	0.45	97.18	2.82	47.18	38.24	9.72	3.45	1.41	16.14	83.23	24.29	67.40
Great Lakes (12)	142,079	703	0.49	98.44	1.56	38.98	44.24	10.81	4.69	1.28	11.52	87.77	23.04	71.12
Upper Midwest (13)	96,279	164	0.17	98.17	1.83	48.78	38.41	8.54	3.66	0.61	14.63	81.71	29.27	55.49
Central Plains (14)	73,699	122	0.17	97.54	2.46	58.20	27.05	8.20	5.74	0.82	14.75	83.61	30.33	61.48
Heartland (15)	148,229	385	0.26	97.40	2.60	51.95	34.29	9.35	4.16	0.26	12.99	86.75	22.08	71.43
South Central (16)	294,286	1,596	0.54	97.68	2.32	45.80	38.16	10.40	4.32	1.32	15.85	78.51	26.57	65.41
Heart of Texas (17)	151,601	775	0.51	97.42	2.58	50.84	32.90	10.84	3.35	2.06	17.16	82.58	35.61	53.42
Southwest (18)	154,764	523	0.34	97.71	2.29	40.15	40.34	13.38	4.40	1.72	16.63	81.26	28.87	64.24
Rocky Mt. (19)	95,866	330	0.34	99.70	0.30	47.88	38.18	8.79	4.24	0.91	10.61	88.79	39.09	53.33
Northwest (20)	143,215	548	0.38	98.18	1.82	43.25	39.05	12.23	4.38	1.09	14.96	83.76	38.50	53.28
Sierra Pacific (21)	149,020	1,041	0.70	98.66	1.34	36.31	41.50	14.22	6.24	1.73	9.61	89.24	32.08	55.81
Desert Pacific (22)	178,204	1,534	0.86	98.57	1.43	44.72	37.42	11.80	4.95	1.11	9.52	88.92	26.86	64.34
National	3,314,672	18,235	0.55	97.77	2.23	41.81	41.28	10.77	4.80	1.34	18.28	81.72	29.43	61.23



**Table 6.2:** Overall Resource Utilization – HIV/AIDS (Primary Diagnosis Group) Compared to All Users, FY-2000 **Total Patients Bed Days** Discharges **Outpatient Visits Total Veterans Integrated Service Patients** HIV/AIDS of Care Network (VISN) HIV/AIDS HIV/AIDS Total Total Total HIV/AIDS N N % % % N % N New England (1) 158,204 550 0.35 303,134 2,805 0.93 24,413 291 1.19 1,990,550 15,968 0.80 Upstate NY (2) 100,499 278 0.28 120,203 1,557 1.30 11,871 168 1.42 1,093,796 7,738 0.71 NY/NJ (3) 166,593 1,965 1.18 405,186 2.69 878 3.64 1,854,064 54,552 2.94 10,908 24,128 Stars and Stripes (4) 202,472 859 0.42 284,688 4,399 1.55 24,122 412 1.71 1,846,937 21,531 1.17 Capitol (5) 3.07 4.23 88,163 1,268 1.44 222,405 6,824 17,107 723 1,007,572 35,612 3.53 Mid-Atlantic (6) 921 0.57 1.30 161,081 361,832 3,704 1.02 31,256 405 1,491,680 14,676 0.98 Atlantic (7) 2.14 201,514 1,576 0.78 369,514 6,154 1.67 29,275 627 1,891,761 24,134 1.28 Sunshine (8) 308,906 2,226 0.72 392,501 7,592 1.93 41,850 833 1.99 3,109,217 39,922 1.28 Mid-South (9) 165,501 469 0.28 316,108 1,972 0.62 34,579 246 0.71 1,483,519 7,293 0.49 Ohio (10) 117,463 447 0.38 191.574 1.918 1.00 18.945 226 1.19 1,327,847 11.141 0.84 Vets in Partnership (11) 142,393 577 0.41 311,786 2,079 0.67 23,779 226 0.95 1,368,643 8,806 0.64 Great Lakes (12) 142.079 625 0.44 334.130 3,772 1.13 30.157 437 1.45 1.715.017 18.036 1.05 Upper Midwest (13) 96,279 157 0.16 107,644 632 0.59 16,092 80 0.50 934,533 3,589 0.38 Central Plains (14) 73,699 111 0.15 76,697 0.21 9,898 31 0.31 674,604 1,462 0.22 160 Heartland (15) 148,229 363 0.24 211,861 1,602 0.76 162 0.63 1,458,394 4,921 0.34 25,568 South Central (16) 294,286 1,504 0.51 454,315 5,835 47,751 542 1.14 0.90 1.28 2,750,358 24,876 Heart of Texas (17) 151,601 725 0.48 297,463 2,263 0.76 25,932 318 1.23 1,544,273 13,856 0.90 Southwest (18) 154,764 504 0.33 167,362 1,274 0.76 23,822 206 0.86 1,574,259 8,295 0.53 Rocky Mt. (19) 0.55 95,866 310 0.32 132,102 645 0.49 15,065 83 959,415 4,566 0.48 Northwest (20) 143,215 0.35 159 0.65 1,488,150 9,533 0.64 508 181,076 1,096 0.61 24,296 Sierra Pacific (21) 149,020 972 0.65 214,370 2,499 1.17 19,163 295 1.54 1,630,530 19,982 1.23 Desert Pacific (22) 178,204 1,461 0.82 231,584 3,641 1.57 25,132 457 1.82 2,119,773 28,205 1.33 **National** 3.314.672 17.048 0.51 5,687,535 73.331 1.29 544.201 7.805 1.43 35,314,892 378.694 1.07

Table 6.3: Overall Resource Utilization – HIV/AIDS (Secondary Diagnosis Group) Compared to All Users, FY-2000													
Veterans Integrated Service Network (VISN)	Total Patients	Total Pa HIV/A		j	Bed Days of Care			Discharges			Outpatient Visits		
	N.	N	0/	Total	HIV/AIDS	0/	Total HIV/AIDS		0/	Total HIV/AIDS			
New England (1)	N 158,204	N 59	0.04	N 303,134	N 410	0.14	N 24,413	N 47	0.19	N 1,990,550	N 2,628	0.13	
Upstate NY (2)	100,499	38	0.04	120,203	295	0.14	11,871	31	0.19	1,093,796	872	0.13	
NY/NJ (3)	166,593	182	0.11	405,186	3,568	0.88	24,128	209	0.87	1,854,064	2,660	0.14	
Stars and Stripes (4)	202,472	61	0.03	284,688	624	0.22	24,122	60	0.25	1,846,937	1,673	0.09	
Capitol (5)	88,163	67	0.08	222,405	1,078	0.48	17,107	67	0.39	1,007,572	1,320	0.13	
Mid-Atlantic (6)	161,081	64	0.04	361,832	593	0.16	31,256	62	0.20	1,491,680	594	0.04	
Atlantic (7)	201,514	78	0.04	369,514	514	0.14	29,275	52	0.18	1,891,761	1,127	0.06	
Sunshine (8)	308,906	112	0.04	392,501	1,250	0.32	41,850	74	0.18	3,109,217	1,230	0.04	
Mid-South (9)	165,501	43	0.03	316,108	286	0.09	34,579	35	0.10	1,483,519	641	0.04	
Ohio (10)	117,463	22	0.02	191,574	90	0.05	18,945	13	0.07	1,327,847	611	0.05	
Vets in Partnership (11)	142,393	61	0.04	311,786	439	0.14	23,779	58	0.24	1,368,643	1,693	0.12	
Great Lakes (12)	142,079	78	0.05	334,130	971	0.29	30,157	99	0.33	1,715,017	2,465	0.14	
Upper Midwest (13)	96,279	7	0.01	107,644	14	0.01	16,092	3	0.02	934,533	66	0.01	
Central Plains (14)	73,699	11	0.01	76,697	67	0.09	9,898	6	0.06	674,604	185	0.03	
Heartland (15)	148,229	22	0.01	211,861	113	0.05	25,568	20	0.08	1,458,394	601	0.04	
South Central (16)	294,286	92	0.03	454,315	699	0.15	47,751	54	0.11	2,750,358	1,332	0.05	
Heart of Texas (17)	151,601	50	0.03	297,463	438	0.15	25,932	38	0.15	1,544,273	593	0.04	
Southwest (18)	154,764	19	0.01	167,362	203	0.12	23,822	16	0.07	1,574,259	278	0.02	
Rocky Mt. (19)	95,866	20	0.02	132,102	90	0.07	15,065	8	0.05	959,415	409	0.04	
Northwest (20)	143,215	40	0.03	181,076	213	0.12	24,296	25	0.10	1,488,150	629	0.04	
Sierra Pacific (21)	149,020	69	0.05	214,370	421	0.20	19,163	38	0.20	1,630,530	1,188	0.07	
Desert Pacific (22)	178,204	73	0.04	231,584	106	0.05	25,132	20	0.08	2,119,773	1,229	0.06	
National	3,314,672	1,187	0.04	5,687,535	12,482	0.22	544,201	1,035	0.19	35,314,892	24,024	0.07	



	<b>Table 6.4:</b>													
Resource Utilization	Resource Utilization for Treatment of HIV/AIDS (Primary Diagnosis Group) Compared to Overall Resource Utilization by All Users, FY-2000													
Veterans Integrated Service Network (VISN)	Total Patients	Total Pa HIV/A			Users, FY Bed Days of Care	-2000		arges		Outpatient Visits				
	N	N	%	Total N	HIV/AIDS N	%	Total N	HIV/AIDS N		Total N	HIV/AID N	S //		
New England (1)	158,204	550	0.35	303,134	219	0.07	24,413	12	0.05	1,990,550	3,289	0.17		
Upstate NY (2)	100,499	278	0.28	120,203	219	0.18	11,871	13	0.11	1,093,796	1,475	0.13		
NY/NJ (3)	166,593	1,965	1.18	405,186	1,698	0.42	24,128	127	0.53	1,854,064	9,033	0.49		
Stars and Stripes (4)	202,472	859	0.42	284,688	498	0.17	24,122	30	0.12	1,846,937	5,150	0.28		
Capitol (5)	88,163	1,268	1.44	222,405	1,183	0.53	17,107	75	0.44	1,007,572	8,704	0.86		
Mid-Atlantic (6)	161,081	921	0.57	361,832	949	0.26	31,256	57	0.18	1,491,680	4,111	0.28		
Atlantic (7)	201,514	1,576	0.78	369,514	1,957	0.53	29,275	164	0.56	1,891,761	7,370	0.39		
Sunshine (8)	308,906	2,226	0.72	392,501	2,482	0.63	41,850	189	0.45	3,109,217	11,988	0.39		
Mid-South (9)	165,501	469	0.28	316,108	564	0.18	34,579	68	0.20	1,483,519	1,845	0.12		
Ohio (10)	117,463	447	0.38	191,574	194	0.10	18,945	20	0.11	1,327,847	2,390	0.18		
Vets in Partnership (11)	142,393	577	0.41	311,786	340	0.11	23,779	28	28 0.12		2,704	0.20		
Great Lakes (12)	142,079	625	0.44	334,130	371	0.11	30,157	51	0.17	1,715,017	2,989	0.17		
Upper Midwest (13)	96,279	157	0.16	107,644	168	0.16	16,092	22	0.14	934,533	1,135	0.12		
Central Plains (14)	73,699	111	0.15	76,697	32	0.04	9,898	7	0.07	674,604	421	0.06		
Heartland (15)	148,229	363	0.24	211,861	630	0.30	25,568	57	0.22	1,458,394	1,057	0.07		
South Central (16)	294,286	1,504	0.51	454,315	2,654	0.58	47,751	215	0.45	2,750,358	6,695	0.24		
Heart of Texas (17)	151,601	725	0.48	297,463	468	0.16	25,932	68	0.26	1,544,273	6,060	0.39		
Southwest (18)	154,764	504	0.33	167,362	244	0.15	23,822	44	0.18	1,574,259	2,618	0.17		
Rocky Mt. (19)	95,866	310	0.32	132,102	97	0.07	15,065	14	0.09	959,415	1,391	0.14		
Northwest (20)	143,215	508	0.35	181,076	166	0.09	24,296	19	0.08	1,488,150	2,327	0.16		
Sierra Pacific (21)	149,020	972	0.65	214,370	591	0.28	19,163	72	0.38	1,630,530	4,728	0.29		
Desert Pacific (22)	178,204	1,461	0.82	231,584	844	0.36	25,132	94	0.37	2,119,773	9,018	0.43		
National	3,314,672	17,048	0.51	5,687,535	16,568	0.29	544,201	1,446	0.27	35,314,892	96,498	0.27		

**Table 6.5:** Resource Utilization for Treatment of HIV/AIDS Compared to Overall Utilization by the HIV/AIDS Cohort (Primary Diagnosis **Group), FY-2000 Total Patients Bed Days** Discharges **Outpatient Visits** Total **Veterans Integrated Service Patients HIV/AIDS** of Care Network (VISN) Total HIV/AIDS Total HIV/AIDS Total HIV/AIDS Ν N % N % N % New England (1) 158.204 550 0.35 2,805 219 7.81 291 12 4.12 15,968 3.289 20.60 Upstate NY (2) 100,499 278 0.28 219 14.07 168 13 7.74 1,475 19.06 1,557 7,738 NY/NJ (3) 166,593 1,965 1.18 10,908 1,698 15.57 878 127 14.46 54,552 9,033 16.56 Stars and Stripes (4) 202,472 859 0.42 4,399 498 11.32 412 30 7.28 21,531 5,150 23.92 Capitol (5) 88,163 1,268 1.44 6,824 1,183 17.34 723 75 10.37 35,612 8,704 24.44 Mid-Atlantic (6) 57 161,081 921 0.57 3,704 949 25.62 405 14.07 14,676 4,111 28.01 Atlantic (7) 1,957 201,514 1,576 0.78 6,154 31.80 627 164 26.16 24,134 7,370 30.54 Sunshine (8) 833 189 39,922 308,906 2,226 0.72 7,592 2,482 32.69 22.69 11,988 30.03 Mid-South (9) 165,501 469 0.28 1,972 564 68 27.64 7,293 1,845 25.30 28.60 246 Ohio (10) 117,463 447 0.38 1,918 194 226 20 8.85 11,141 2,390 21.45 10.11 Vets in Partnership (11) 142,393 577 0.41 2,079 340 16.35 226 28 12.39 8,806 2,704 30.71 Great Lakes (12) 371 51 142,079 625 0.44 3,772 9.84 437 11.67 18,036 2.989 16.57 Upper Midwest (13) 22 168 80 96,279 157 0.16 632 26.58 27.50 3,589 1,135 31.62 Central Plains (14) 32 7 73,699 111 0.15 160 20.00 31 22.58 1,462 421 28.80 Heartland (15) 148,229 363 0.24 630 39.33 162 57 35.19 4.921 1.057 21.48 1.602 South Central (16) 294,286 1.504 0.51 5.835 2.654 45.48 542 215 39.67 24.876 6.695 26.91 Heart of Texas (17) 151,601 725 0.48 2,263 468 20.68 318 68 21.38 13,856 6,060 43.74 Southwest (18) 154,764 504 0.33 1,274 244 19.15 206 44 21.36 8,295 2,618 31.56 Rocky Mt. (19) 97 95,866 310 0.32 645 15.04 83 14 16.87 4,566 1,391 30.46 Northwest (20) 143,215 0.35 166 19 9,533 508 1,096 15.15 159 11.95 2,327 24.41 Sierra Pacific (21) 149,020 972 0.65 2,499 591 23.65 295 72 24.41 19,982 4,728 23.66 Desert Pacific (22) 178,204 0.82 844 457 94 28,205 1,461 3,641 23.18 20.57 9,018 31.97 National

3,314,672

17,048

0.51

73,331

16,568

22.59

7,805

1,446

18.53

378,694

96,498

25.48



Table 6.6: FY-2000 Cost of HIV/AIDS (Primary Diagnosis)													
	No. of Patients	Outpati		Inpatient Med/S		Inpatient	Other	Pharmacy		Total			
,		\$	%	\$	%	\$	%	\$	%	\$			
New England (1)	554	2,795,921	36.99%	1,920,803	25.41%	1,326,548	17.55%	1,516,332	20.06%	7,559,604			
Upstate NY (2)	281	1,051,818	25.04%	1,272,964	30.30%	902,729	21.49%	973,788	23.18%	4,201,299			
NY/NJ (3)	1969	8,786,562	25.31%	10,832,329	31.21%	4,779,493	13.77%	10,311,319	29.71%	34,709,702			
Stars and Stripes (4)	864	2,964,761	28.08%	3,812,184	36.11%	1,972,161	18.68%	1,807,978	17.13%	10,557,085			
Capitol (5)	1265	4,626,940	29.15%	7,020,211	44.22%	2,514,249	15.84%	1,713,715	10.79%	15,875,114			
Mid-Atlantic (6)	923	2,051,933	19.70%	2,584,242	24.81%	1,347,081	12.93%	4,433,278	42.56%	10,416,534			
Atlantic (7)	1579	3,910,949	23.68%	5,954,769	36.06%	1,594,758	9.66%	5,052,588	30.60%	16,513,065			
Sunshine (8)	2257	6,899,160	28.98%	7,080,802	29.74%	2,021,475	8.49%	7,805,459	32.79%	23,806,896			
Mid-South (9)	472	1,122,361	21.61%	1,825,927	35.16%	494,627	9.52%	1,750,845	33.71%	5,193,760			
Ohio (10)	451	2,002,752	36.68%	1,674,697	30.67%	1,084,622	19.86%	698,574	12.79%	5,460,645			
Vets in Partnership (11)	577	1,660,690	24.92%	1,796,394	26.96%	723,728	10.86%	2,482,247	37.25%	6,663,060			
Great Lakes (12)	625	2,614,944	26.34%	3,369,597	33.94%	1,750,129	17.63%	2,193,503	22.09%	9,928,174			
Upper Midwest (13)	157	642,708	22.02%	754,204	25.84%	394,717	13.52%	1,127,069	38.62%	2,918,698			
Central Plains (14)	111	247,920	24.48%	185,791	18.35%	83,498	8.24%	495,534	48.93%	1,012,743			
Heartland (15)	365	742,169	20.82%	1,337,199	37.51%	369,165	10.36%	1,116,405	31.32%	3,564,939			
South Central (16)	1517	3,664,500	22.31%	5,179,837	31.53%	1,754,152	10.68%	5,827,275	35.48%	16,425,763			
Heart of Texas (17)	727	2,218,284	25.32%	2,306,023	26.32%	700,456	7.99%	3,537,768	40.37%	8,762,531			
Southwest (18)	507	1,108,619	20.12%	1,404,228	25.49%	550,215	9.99%	2,446,445	44.40%	5,509,507			
Rocky Mt. (19)	314	628,136	18.23%	840,527	24.39%	105,831	3.07%	1,871,000	54.30%	3,445,494			
Northwest (20)	507	1,561,704	29.19%	1,338,656	25.02%	391,686	7.32%	2,057,858	38.47%	5,349,904			
Sierra Pacific (21)	978	3,209,711	21.66%	2,968,502	20.03%	1,623,741	10.96%	7,019,017	47.36%	14,820,971			
Desert Pacific (22)	1466	4,794,106	25.29%	6,030,561	31.82%	1,656,369	8.74%	6,473,851	34.15%	18,954,886			
National	17,047	59,306,648	25.60%	71,490,446	30.86%	28,141,431	12.15%	72,711,848	31.39%	231,650,372			

Table 6.7: FY-2000 Cost of HIV/AIDS (Secondary Diagnosis)													
Veterans Integrated Service Network	No. of Patients	o. of Outp		_	nt Med/Surg	, ,		Pharmacy		Pharmacy		Pharmacy	
Service rectwork	atients	\$	%	\$	%	\$	%	\$	%	\$			
New England (1)	59	846,216	67.88%	113,286	9.09%	236,606	18.98%	50,490	4.05%	1,246,598			
Upstate NY (2)	38	121,085	23.58%	123,540	24.06%	235,745	45.92%	33,034	6.43%	513,403			
NY/NJ (3)	183	634,850	10.73%	2,906,184	49.12%	2,266,697	38.31%	108,982	1.84%	5,916,713			
Stars and Stripes (4)	61	190,697	19.87%	311,507	32.46%	386,128	40.24%	71,346	7.43%	959,679			
Capitol (5)	68	143,430	10.30%	715,144	51.38%	501,277	36.02%	31,998	2.30%	1,391,849			
Mid-Atlantic (6)	64	96,472	12.29%	348,619	44.40%	308,314	39.27%	31,795	4.05%	785,201			
Atlantic (7)	81	163,784	22.94%	317,593	44.49%	157,431	22.05%	75,049	10.51%	713,857			
Sunshine (8)	112	213,554	12.68%	764,635	45.39%	628,803	37.33%	77,632	4.61%	1,684,624			
Mid-South (9)	44	121,084	25.38%	198,038	41.51%	82,523	17.30%	75,431	15.81%	477,075			
Ohio (10)	22	65,436	31.71%	84,810	41.10%	34,363	16.65%	21,757	10.54%	206,365			
Vets in Partnership (11)	62	305,760	34.09%	295,707	32.97%	213,364	23.79%	81,974	9.14%	896,805			
Great Lakes (12)	78	401,686	22.07%	890,063	48.90%	436,325	23.97%	92,192	5.06%	1,820,266			
Upper Midwest (13)	7	10,304	29.99%	5,279	15.36%	15,763	45.87%	3,018	8.78%	34,363			
Central Plains (14)	11	19,561	16.05%	69,915	57.36%	11,431	9.38%	20,970	17.21%	121,877			
Heartland (15)	21	98,723	30.88%	134,905	42.20%	40,369	12.63%	45,702	14.30%	319,698			
South Central (16)	92	210,451	14.12%	894,479	60.03%	223,965	15.03%	161,106	10.81%	1,490,001			
Heart of Texas (17)	51	73,332	10.32%	326,369	45.94%	266,281	37.48%	44,425	6.25%	710,408			
Southwest (18)	19	39,758	11.09%	197,896	55.18%	35,353	9.86%	85,618	23.87%	358,624			
Rocky Mt. (19)	20	47,357	28.12%	35,925	21.33%	53,643	31.85%	31,477	18.69%	168,401			
Northwest (20)	40	99,316	19.15%	301,295	58.11%	90,073	17.37%	27,818	5.37%	518,502			
Sierra Pacific (21)	69	167,633	20.77%	236,583	29.31%	318,643	39.48%	84,193	10.43%	807,053			
Desert Pacific (22)	75	224,196	34.94%	238,582	37.18%	105,394	16.43%	73,458	11.45%	641,629			
National	1187	4,294,684	19.72%	9,510,353	43.66%	6,648,492	30.52%	1,329,463	6.10%	21,782,993			



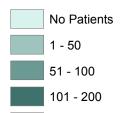
**Map 6.1** 



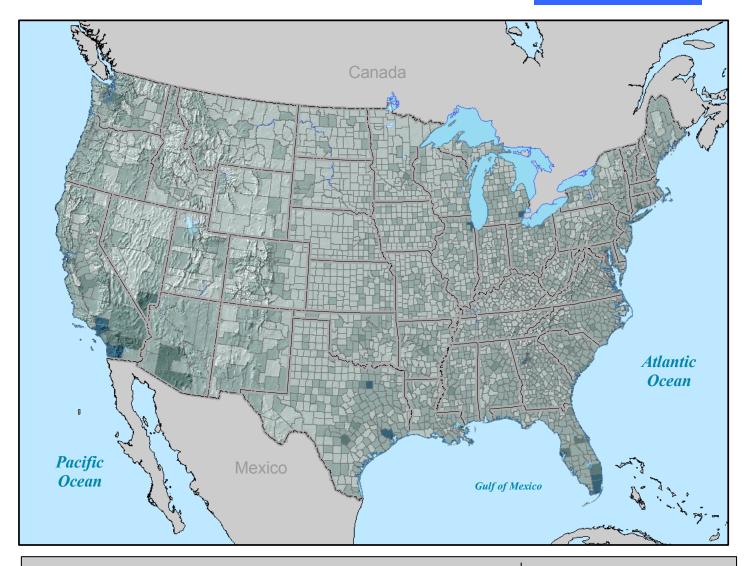




#### **Number of Patients**



Greater than 200



# Number of VA Patients with HIV/AIDS by County FY-2000

VA Health Care Atlas HSR&D SDR 01-175 Source: VA Medical SAS Databases, FY-00

Created in ArcGIS 8 using ArcMap

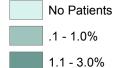
**Map 6.2** 





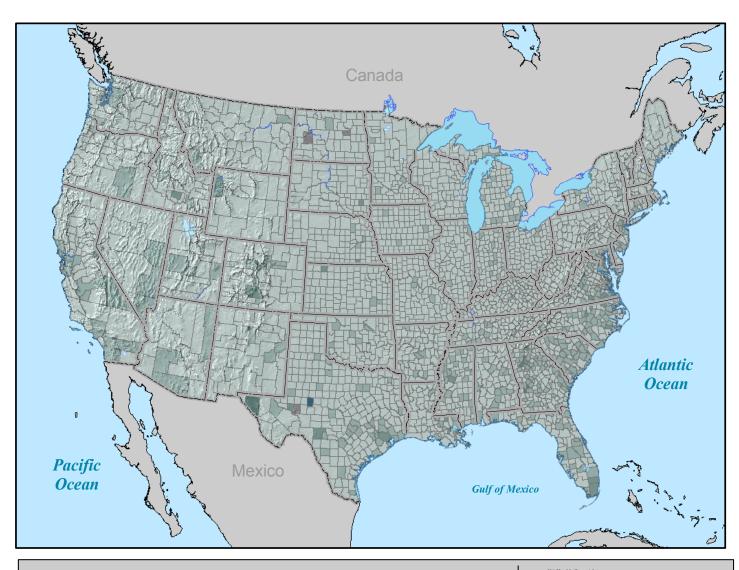


#### **Percent of Patients**



3.1 - 5%

Greater than 5%



Percent of VA Patients with HIV/AIDS by County FY-2000

VA Health Care Atlas HSR&D SDR 01-175

Source: VA Medical SAS Databases, FY-00 Created in ArcGIS 8 using ArcMap



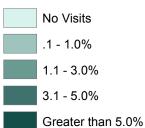
**Map 6.3** 

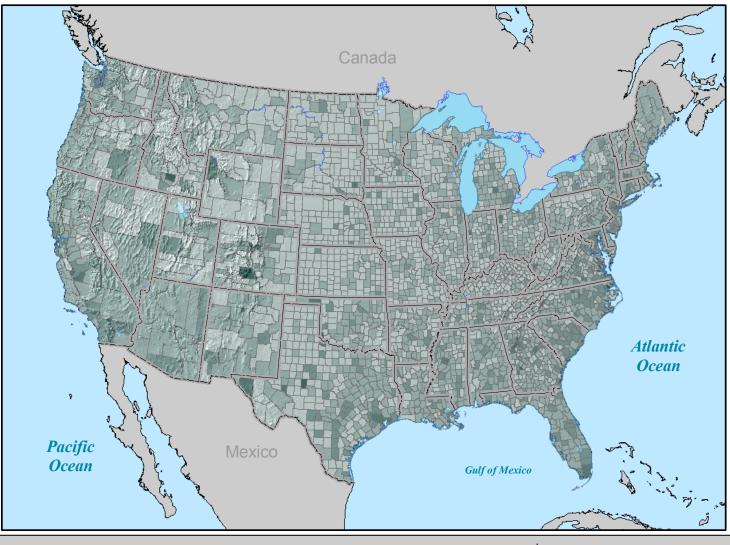






#### **Percent**





Percent Disease-Specific Visits of Total Visits (HIV/AIDS) by County FY-2000

VA Health Care Atlas HSR&D SDR 01-175

Source: VA Medical SAS Databases, FY-00

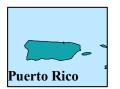
Created in ArcGIS 8 using ArcMap

### HIV/AIDS

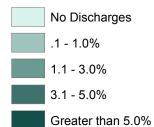
**Map 6.4** 

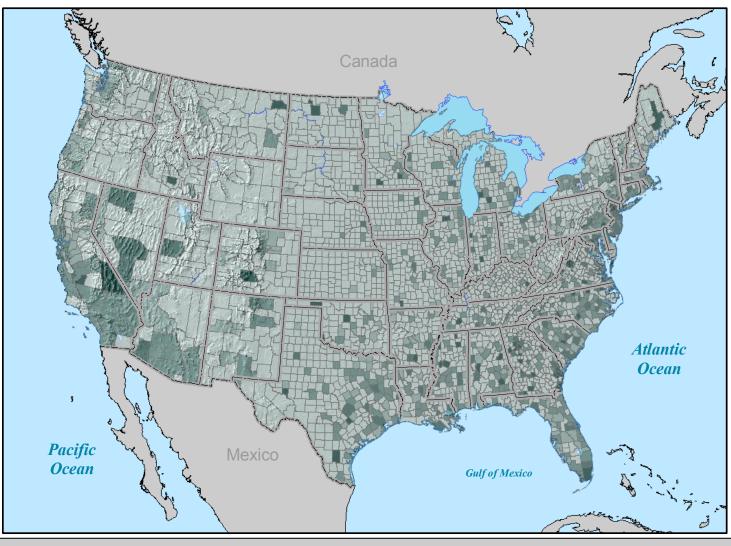






#### **Percent**





Percent Disease-Specific Discharges of Total Discharges (HIV/AIDS) by County FY-2000

VA Health Care Atlas
HSR&D SDR 01-175

Source: VA Medical SAS Databases, FY-00

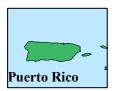
Created in ArcGIS 8 using ArcMap



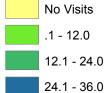
**Map 6.5** 



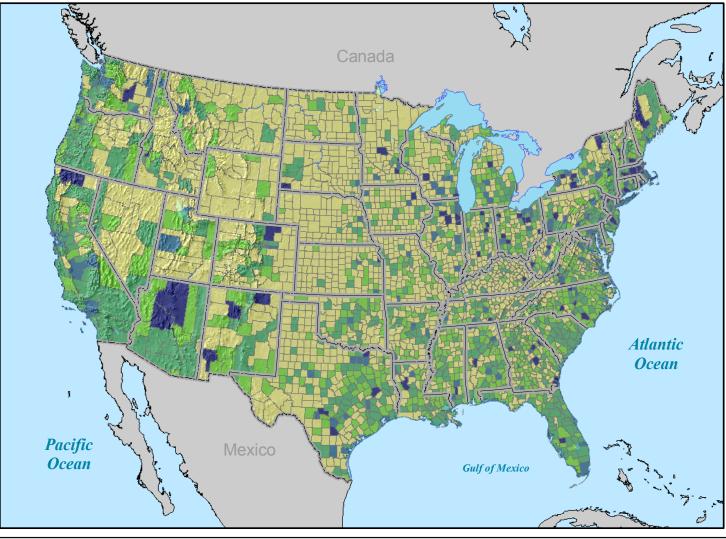




#### Number



Greater than 36.0



Average Number of Visits for Patients with HIV/AIDS by County FY-2000

VA Health Care Atla. HSR&D SDR 01-175

Source: VA Medical SAS Databases, FY-00 Created in ArcGIS 8 using ArcMap

## HIV/AIDS

**Mp 6.6** 







#### Number per 1,000

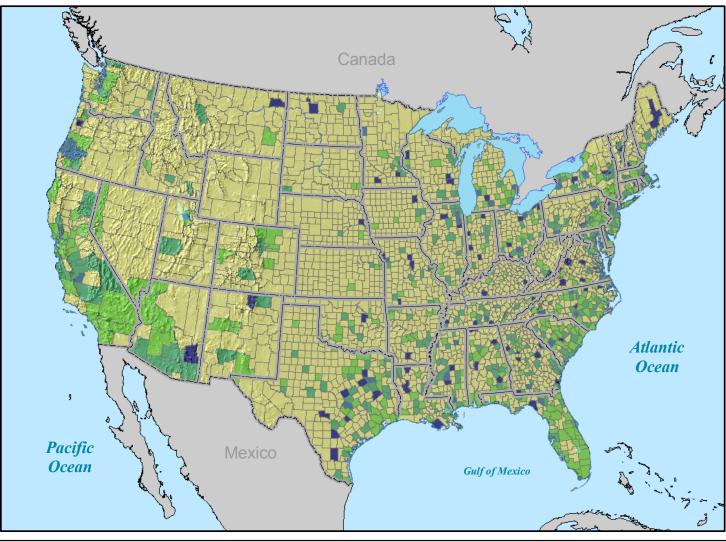
No Discharges

1 - 500

501 - 1000

1001 - 1500

More than 1500



Disease Specific Discharges per 1,000 Patients with HIV/AIDS by County FY-2000

VA Health Care Atlas HSR&D SDR 01-175

Source: VA Medical SAS Databases, FY-00 Created in ArcGIS 8 using ArcMap



#### **For More Information**

Human Immunodeficiency Virus (HIV) infection is a condition that causes a chronic progressive disease that leads to early death if untreated. HIV is characterized by persistent viral replication throughout an extended period of time in which patients experience few or no symptoms, while their immune system is under siege. Over the course of 5 to 10 years, HIV typically results in significant immune depletion and dysfunction, chronic symptoms, and vulnerability to a variety of opportunistic conditions that characterize AIDS (Acquired Immune Deficiency Syndrome). There are 650,000 to 900,000 infected adults in the United States, and VA cares for about 17,000 to 18,000 HIV-infected patients each year, making it the largest provider of HIV care in the US.

QUERI-HIV is located at the San Diego VA Medical Center and is co-chaired by a Research Coordinator, Sam Bozzette, MD, PhD and a Clinical Coordinator, Deborah Cotton, MD, MPH. Researchers or other interested parties are encouraged to contact the QUERI –HIV Coordinator to learn more about VHA's current research foci and ongoing projects in the area of HIV:

Candice Bowman, PhD, RN QUERI Coordinator VA Medical Center (111N-1) 3350 La Jolla Village Drive San Diego, CA 92161 Telephone: 858/552-4325 FAX: 858/552-4321

E-mail: Candice.Bowman@med.va.gov

A summary of HIV/AIDS QUERI activities is provided below. These descriptions were extracted from the Fact Sheets available on the Web site: <a href="http://www.hsrd.research.va.gov/queri.cfm">http://www.hsrd.research.va.gov/queri.cfm</a>.

#### **Research Focus and Translation Activities**

The QUERI-HIV translation plan emphasizes the general importance of optimizing drug therapies and the need to implement change around a gap discovered in adequate antiretroviral prescribing practices. Most importantly, QUERI-HIV research indicates that antiretroviral treatment in the VA ranges from exceeding clinical expectations in some facilities to falling short of professional standards in others, even when disregarding controversies about when to start treatment or highly active combinations. For example, preliminary findings showed that in the third quarter of 1999, 55 percent of HIV patients in VA care with indications for antiretroviral therapy received acceptable combinations of antiretroviral drugs, ranging from 27 to 80 percent per facility. However, 4 percent received single drugs or combinations of drugs that are not recommended, ranging from 0 to 21 percent of patients per site. Current QUERI-HIV translation activities include developing a research standard database of patients receiving HIV care in VA, testing quality improvement (QI) strategies to improve HIV care, evaluating QI impacts on HIV patients and on the system (e.g., mortality measures, utilization rates), testing strategies to improve adherence to antiretroviral medications, improving screening practices to promote prevention, and investigating the effects of highly active antiretroviral therapy on the development of cardioand cerebrovascular disease.

Here are just a few important areas of QUERI-HIV research and planned follow-up:

• *Veterans in care:* Pilot studies have shown an increasing number of HIV-infected veterans with comorbidities such as substance abuse and serious mental illness, or both. QUERI-HIV anticipates proposing additional research on the management and outcomes of these conditions and how they relate to HIV and its treatment.

#### HIV/AIDS

- Veterans not in care and those in care outside VHA: QUERI-HIV is addressing several issues including veterans not in care and those who receive care outside VHA. While there are gaps in the knowledge about those with HIV infection who are not in care, research shows that minorities and other disadvantaged groups have inferior access to services. While economic barriers and fear of stigma may explain some lack of care, other barriers exist. QUERI-HIV will work to further assess any gaps that affect veterans with HIV who are not in care. Research also shows that veterans in care outside VHA, after adjusting for demographic and disease stage, are less likely to be uninsured than nonveterans. Thus VHA provides an effective "safety net."
- Metabolic disorders: Over the past several years, lipodystrophy (defective metabolism of fat) has been recognized as a complication of HIV disease and treatment, particularly treatment with protease inhibitors. In addition, there is now increasing concern regarding hyperlipidemia, osteoporosis, and the potential for an increased risk of cardio/cerebrovascular events (i.e., myocardial infarction and stroke). QUERI-HIV is close to completing a study of the possible association between highly active antiretroviral therapy and these serious events.
- Antiretroviral and prophylaxis treatment: There is increasing unease that guidelines for antiretroviral and prophylaxis treatment of opportunistic infections may be too aggressive, and many practitioners concerned about the risk of side-effects are advocating a more conservative approach. QUERI-HIV will continue to closely monitor this treatment evolution when planning quality improvement efforts.